

Landfill Buffer Zone Ordinance in Monterey County

CIWMB/LEA Partnership Conference
October 18, 2007

Matt Fore, REHS, MPA
Monterey County LEA



Monterey County Disposal Sites

- 3 active disposal sites:
 - Crazy Horse Landfill (SVSWA)
 - Johnson Canyon Landfill (SVSWA)
 - Monterey Peninsula Landfill (MRWMD)
- 17 closed disposal sites



Need for a Local Buffer Zone Ordinance (LBZO)

1. Explosive hazard posed by landfill gas (LFG)
2. Threat to groundwater
3. Title 27 shortfall: 27 CCR §21190 requires facility owners to control LFG in onsite structures located within 1,000 feet of the disposal area

Regulation does not extend beyond the permitted boundary



Need for Local LBZO (cont)

4. Encroaching Development: Ensure long-term availability of disposal sites by avoiding potential conflicts between disposal sites and adjacent land uses (e.g. Lewis Road Settlement Agreement, 2001)



History of LBZO's in Mo. Co.

- January 14, 1997: County adopted Ordinance 03900
 - Established 2,500' buffer zone around facilities located within the boundaries of the Salinas Valley Solid Waste Authority (SVSWA).
Exp Date: Jan. 1998
 - SVSWA: JPA serving Salinas Valley Cities and inland portion of unincorporated Monterey County



History of LBZO's in Mo. Co.

- November 4, 1997: Board of Supervisors passed Ordinance 03944
 - reauthorized buffer zone for additional year (Jan. 1999)
 - Also exempted vacant lots located more than 1,000 feet from the landfill and which were part of approved subdivisions in which 75% of the subdivision had been built upon



Lewis Road Settlement Agreement

- March 25, 1998: Lewis Road Landfill Citizens Action Committee filed an action against the SVSWA and Monterey County
 - Requested that the court require LEA to enforce IWM Act and CEQA



Lewis Road Settlement Agreement (cont)

- 2001: Court ruled in favor of the plaintiff and mandated the following:
 - SVSWA to immediately reduce methane concentrations to below the LEL.
 - LEA to monitor whether or not landfill gas was migrating beyond the Lewis Road boundary.



Lewis Road Settlement and Future LBZO

Settlement Agreement also defined future application of potential LBZO to the settlement parcels

- Conditional use permit fees waived
- Passive landfill gas venting system required beneath the structures. Interior methane gas sensors set at 1.25%
- Water well annular seals must seal shallow perched aquifer



New Ordinance 2007

- April 28, 2007: County released draft of new LBZO for review under CEQA
- Comments received from April through mid June 2007
- 83 letters received
- Dozens of phone calls



Structure of Proposed Ordinance

Proposed Ordinance defines land uses adjacent to landfills based upon several criteria:

1. Location: Zone A or B
2. Facility Status: Active or closed
3. Lewis Road Settlement Parcel



Location: Zone A or B

- Zone A: Landfills located within the boundaries of the SVSWA.
- Zone B: Landfills **not** located within the boundaries of the SVSWA.



Reference Point for Buffer Distance

- Zone A: Buffer extends to parcels located 2,500 feet from active or closed facilities.
- Zone B: Buffer extends to parcels located 1,000 feet from active or closed facilities.

Buffer measured from facility boundary of active sites and from the waste footprint of closed sites



Facility Status: Active

Uses allowed/restricted around Active facilities in both Zone A and B:

- Commercial, industrial, office use only with **conditional use permit**
- No new construction or creation of new lots
- No new water well installation



Closed Site Allowable Land Uses

The following uses are allowed adjacent to closed facilities in Zone A and B: **

- Residential construction
- Creation of new lots
- Well construction: Seal below deepest cell
- Grading

All subject to CUP and site assessment to determine LFG migration risk



Issues Raised During Public Comment Period

1. Takings Issue: LBZO restricts land use, may decrease property values, and therefore represents a taking of private property by the government
2. Differing Zones: SVSWA Joint Powers Agreement mandates 2,500 foot buffer; MRWMD Agreement does not



Issues Raised During Public Comment Period (cont)

3. Grandfather Clause: Existing lots of record should not be subject to new regulations
4. County Liability: County should have recognized risks posed by landfills when it originally approved lots and structures. It should be responsible for implementing any corrective actions to mitigate any potential threats.



Site Assessment Factors

5. Site Assessment Protocol is ill-defined: Draft states that engineer shall consider the following:
 - Age of landfill
 - Date of closure
 - Is facility lined, partially lined or not at all?
 - Depth to groundwater and presence of contamination by facility



Site Assessment Factors (cont)

- Geological and hydro-geological setting of facility
- Presence of LFG and migration potential (must account for seasonal variations)
- Presence and concentration of LFG constituent gases in air, soil, and water



Interim Protection Measures

- Pending adoption of LBZO, LEA has followed mitigations in 27 CCR §21190:
- Laguna Seca Subdivision:
 - Passive venting at foundation
 - Interior methane gas monitors and alarms
- Edelman Project – Lewis Road
 - Landfill gas site assessment for initial study



Site Assessment Refinements

CIWMB work at the Laguna Seca Closed Landfill in Monterey County is proving to be a good model for site assessment protocol



Laguna Seca Landfill

- Located on private property
- Remainder parcel of subdivision
- Closed in 1966 (pre Subtitle D)
- Encroaching development throughout 1980's and 1990's left little buffer
- Incomplete waste characterization and LFG monitoring data

Laguna Seca Landfill

Parcel Map



Laguna Seca Landfill

Site Photos-Feb 2007



Laguna Seca Landfill

Site Photos-Feb 2007



Laguna Seca Landfill

Site Photos Feb 2007



Laguna Seca Landfill

Site Photos Feb 2007





Next Steps

- Large volume of public comments: County has postponed bringing LBZO to Planning Commission
- Fall and winter 2007: public workshops to be held at four sites around Monterey County
- County working on contract with geologist and landfill gas expert to assist with refinement of site assessment protocol and to provide technical guidance during workshops



Next Steps (cont)

- County Counsel reviewing comments and will respond to legal issues
- Amend language and re-circulate
- Eventually bring to Planning Commission for formal consideration



Next Steps (cont)

- White paper for elected officials and stakeholders to define problem, outline proposed ordinance, and address outstanding issues
- Investigating Brownfield Assessment Grants to evaluate risks at other sites such as Bradley Closed Landfill where buffer covers nearly entire town



Lessons Learned...or Confirmed

- Land use restrictions are unpopular
- Laguna Seca and Lewis Road properties may set precedent for evaluating site assessment protocol
- CIWMB Closed, Illegal, and Abandoned (CIA) Disposal Site Program is an invaluable resource



Recommendations

- Adopt local ordinance before development encroaches on active and closed facilities
- Involve elected officials and the public early and keep informed throughout entire process
- Clearly define site assessment protocol



Resources Available

1. Text and maps of Monterey County LBZO available at:
http://www.co.monterey.ca.us/pbi/major/Landfill%20Buffer%20Zone/landfill_main.htm
2. Allowable use Matrix: Zones A & B, Active versus Closed
3. CIWMB CIA Disposal Site Program (Glenn Young, Angela Basquez, Dawn Owen, Stephanie Young)

Allowable Use Matrix

Proposed Landfill Buffer Zone Ordinance: Allowable Use Matrix ¹

	Zone A (2,500 foot buffer zone from boundary of landfills under the jurisdiction of the Salinas Valley Solid Waste Authority) ²	Zone B (1,000 foot buffer zone from boundary of landfills not under the jurisdiction of the Salinas Valley Solid Waste Authority)
Active Landfill	<p><i>Residential Development</i></p> <ul style="list-style-type: none"> No new residential development or creation of new lots (subdivisions) <p><i>Industrial/Commercial/Office Development</i></p> <ul style="list-style-type: none"> Requires a discretionary use permit ^{3,4} <p><i>Well Construction</i></p> <ul style="list-style-type: none"> No new well construction <p><i>Other</i></p> <ul style="list-style-type: none"> To correct an unsafe or substandard condition or to remedy destruction, the replacement of an equivalent structure or repairs to any standing, legally constructed building is permissible with appropriate mitigation for associated landfill hazards, unless otherwise prohibited by federal, state, or County laws or regulations. 	<p><i>Residential Development</i></p> <ul style="list-style-type: none"> No new residential development or creation of new lots (subdivisions) <p><i>Industrial/Commercial/Office Development</i></p> <ul style="list-style-type: none"> Requires a discretionary use permit ^{3,4} <p><i>Well Construction</i></p> <ul style="list-style-type: none"> No new well construction <p><i>Other</i></p> <ul style="list-style-type: none"> To correct an unsafe or substandard condition or to remedy destruction, the replacement of an equivalent structure or repairs to any standing, legally constructed building is permissible with appropriate mitigation for associated landfill hazards, unless otherwise prohibited by federal, state, or County laws or regulations.
Closed Landfill	<p>The ordinance allows the uses described below, subject to a discretionary use permit⁴, and compliance with all other applicable regulations:</p> <p><i>Residential Development</i></p> <ul style="list-style-type: none"> Allowable on existing legal lot of record only if there is no alternative buildable site outside of zone boundary <p><i>Industrial/Commercial/Office Development</i></p> <ul style="list-style-type: none"> Allowable if consistent with underlying zoning and other applicable County regulations <p><i>Well Construction</i></p> <ul style="list-style-type: none"> Allowable if 1) an annular seal is placed at least ten feet into the first significant impermeable layer (which must be at least ten feet thick) below the depth of the deepest cell within the landfill and 2) an independent hydrological report shows there is no potential for the spread of liquid or gas contaminants emanating from the landfill <p><i>Subdivision</i></p> <ul style="list-style-type: none"> Allowable only if the site assessment demonstrates no existing or potential future hazard <p><i>Grading</i></p> <ul style="list-style-type: none"> If a grading permit required under County regulations <p>Exception: To correct an unsafe or substandard condition or to remedy destruction, the replacement of an equivalent structure or repairs to any standing, legally constructed building is permissible with appropriate mitigation for associated landfill hazards, unless otherwise prohibited by federal, state, or County laws or regulations.</p>	<p>The ordinance allows the uses described below, subject to a discretionary use permit⁴, and compliance with all other applicable regulations:</p> <p><i>Residential Development</i></p> <ul style="list-style-type: none"> Allowable on existing legal lot of record only if there is no alternative buildable site outside of zone boundary <p><i>Industrial/Commercial/Office Development</i></p> <ul style="list-style-type: none"> Allowable if consistent with underlying zoning and other applicable County regulations <p><i>Well Construction</i></p> <ul style="list-style-type: none"> Allowable if 1) an annular seal is placed at least ten feet into the first significant impermeable layer (which must be at least ten feet thick) below the depth of the deepest cell within the landfill and 2) an independent hydrological report shows there is no potential for the spread of liquid or gas contaminants emanating from the landfill <p><i>Subdivision</i></p> <ul style="list-style-type: none"> Allowable only if the site assessment demonstrates no existing or potential future hazard <p><i>Grading</i></p> <ul style="list-style-type: none"> If a grading permit required under County regulations <p>Exception: To correct an unsafe or substandard condition or to remedy destruction, the replacement of an equivalent structure or repairs to any standing, legally constructed building is permissible with appropriate mitigation for associated landfill hazards unless otherwise prohibited by federal, state, or County laws or regulations.</p>

¹ The proposed landfill buffer ordinance is currently under consideration by the County and would apply only to landfills within the unincorporated inland area of the County and, in general, is intended to supplement existing zoning and other County regulation. This matrix is intended to summarize the key points of the proposed landfill buffer ordinance, but the reader is advised to review the proposed ordinance itself for complete information. The proposed ordinance is available for public review at the County Planning Department 168 W. Alisal St., Salinas CA 93901 and the Monterey County Health Department, Division of Environmental Health, 1270 Natividad Rd., room 102, Salinas, CA 93906.

² Properties included in the Lewis Road Landfill Comprehensive Settlement and Release Agreement are subject to sections 21.67.070B-21.67.070C of the proposed ordinance.

³ Applicants for a discretionary use permit will be required to submit a site assessment conducted by a qualified professional engineer analyzing the extent of actual and potential future hazards and proposing measures which mitigate those hazards.

⁴ For properties within Zone A, a discretionary use permit shall not be approved until the application has been reviewed and considered by the Salinas Valley Solid Waste Authority's Board of Directors.



Allowable Use Matrix

Active Landfill

	Zone A (2,500 foot buffer zone from boundary of landfills under the jurisdiction of the Salinas Valley Solid Waste Authority)	Zone B (1,000 foot buffer zone from boundary of landfills not under the jurisdiction of the Salinas Valley Solid Waste Authority)
Active Landfill	<p><i>Residential Development</i></p> <ul style="list-style-type: none"> No new residential development or creation of new lots (subdivisions) <p><i>Industrial/Commercial/Office Development</i></p> <ul style="list-style-type: none"> Requires a discretionary use permit <p><i>Well Construction</i></p> <ul style="list-style-type: none"> No new well construction <p><i>Other</i></p> <ul style="list-style-type: none"> To correct an unsafe or substandard condition or to remedy destruction, the replacement of an equivalent structure or repairs to any standing, legally constructed building is permissible with appropriate mitigation for associated landfill hazards, unless otherwise prohibited by federal, state, or County laws or regulations. 	<p><i>Residential Development</i></p> <ul style="list-style-type: none"> No new residential development or creation of new lots (subdivisions) <p><i>Industrial/Commercial/Office Development</i></p> <ul style="list-style-type: none"> Requires a discretionary use permit <p><i>Well Construction</i></p> <ul style="list-style-type: none"> No new well construction <p><i>Other</i></p> <ul style="list-style-type: none"> To correct an unsafe or substandard condition or to remedy destruction, the replacement of an equivalent structure or repairs to any standing, legally constructed building is permissible with appropriate mitigation for associated landfill hazards, unless otherwise prohibited by federal, state, or County laws or regulations.

Allowable Use Matrix

Closed Landfill

	Zone A (2,500 foot buffer zone from boundary of landfills under the jurisdiction of the Salinas Valley Solid Waste Authority)	Zone B (1,000 foot buffer zone from boundary of landfills not under the jurisdiction of the Salinas Valley Solid Waste Authority)
Active Landfill	<p><i>Residential Development</i></p> <ul style="list-style-type: none"> No new residential development or creation of new lots (subdivisions) <p><i>Industrial/Commercial/Office Development</i></p> <ul style="list-style-type: none"> Requires a discretionary use permit <p><i>Well Construction</i></p> <ul style="list-style-type: none"> No new well construction <p><i>Other</i></p> <ul style="list-style-type: none"> To correct an unsafe or substandard condition or to remedy destruction, the replacement of an equivalent structure or repairs to any standing, legally constructed building is permissible with appropriate mitigation for associated landfill hazards, unless otherwise prohibited by federal, state, or County laws or regulations. 	<p><i>Residential Development</i></p> <ul style="list-style-type: none"> No new residential development or creation of new lots (subdivisions) <p><i>Industrial/Commercial/Office Development</i></p> <ul style="list-style-type: none"> Requires a discretionary use permit <p><i>Well Construction</i></p> <ul style="list-style-type: none"> No new well construction <p><i>Other</i></p> <ul style="list-style-type: none"> To correct an unsafe or substandard condition or to remedy destruction, the replacement of an equivalent structure or repairs to any standing, legally constructed building is permissible with appropriate mitigation for associated landfill hazards, unless otherwise prohibited by federal, state, or County laws or regulations.
Closed Landfill	<p><u>The ordinance allows the uses described below, subject to a discretionary use permit, and compliance with all other applicable regulations:</u></p> <p><i>Residential Development</i></p> <ul style="list-style-type: none"> Allowable on existing legal lot of record only if there is no alternative buildable site outside of zone boundary <p><i>Industrial/Commercial/Office Development</i></p> <ul style="list-style-type: none"> Allowable if consistent with underlying zoning and other applicable County regulations <p><i>Well Construction</i></p> <ul style="list-style-type: none"> Allowable if 1) an annular seal is placed at least ten feet into the first significant impermeable layer (which must be at least ten feet thick) below the depth of the deepest cell within the landfill and 2) an independent hydrological report shows there is no potential for the spread of liquid or gas contaminants emanating from the landfill <p><i>Subdivision</i></p> <ul style="list-style-type: none"> Allowable only if the site assessment demonstrates no existing or potential future hazard <p><i>Grading</i></p> <ul style="list-style-type: none"> If a grading permit required under County regulations <p>Exception: To correct an unsafe or substandard condition or to remedy destruction, the replacement of an equivalent structure or repairs to any standing, legally constructed building is permissible with appropriate mitigation for associated landfill hazards, unless otherwise prohibited by federal, state, or County laws or regulations.</p>	<p><u>The ordinance allows the uses described below, subject to a discretionary use permit, and compliance with all other applicable regulations:</u></p> <p><i>Residential Development</i></p> <ul style="list-style-type: none"> Allowable on existing legal lot of record only if there is no alternative buildable site outside of zone boundary <p><i>Industrial/Commercial/Office Development</i></p> <ul style="list-style-type: none"> Allowable if consistent with underlying zoning and other applicable County regulations <p><i>Well Construction</i></p> <ul style="list-style-type: none"> Allowable if 1) an annular seal is placed at least ten feet into the first significant impermeable layer (which must be at least ten feet thick) below the depth of the deepest cell within the landfill and 2) an independent hydrological report shows there is no potential for the spread of liquid or gas contaminants emanating from the landfill <p><i>Subdivision</i></p> <ul style="list-style-type: none"> Allowable only if the site assessment demonstrates no existing or potential future hazard <p><i>Grading</i></p> <ul style="list-style-type: none"> If a grading permit required under County regulations <p>Exception: To correct an unsafe or substandard condition or to remedy destruction, the replacement of an equivalent structure or repairs to any standing, legally constructed building is permissible with appropriate mitigation for associated landfill hazards unless otherwise prohibited by federal, state, or County laws or regulations.</p>

The End

Questions?